Customer No.: 00909

Amendment Dated: March 15, 2007

Applicant:

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## Amendments to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in this application.

1. (Currently amended) A lithographic projection apparatus, comprising:

a radiation system configured to provide a beam of radiation;

a support configured to support a patterning device, the patterning device configured to pattern the beam according to a desired pattern;

a substrate table configured to hold a substrate; and

a projection system configured to project the patterned beam onto a target portion of the substrate, wherein a space in the apparatus comprises a composition to remove a contaminant from a surface of the apparatus, the composition containing (a) and (b), wherein (a) is one or more perhalogenated C<sub>1</sub>-C<sub>6</sub> alkanes and (b) is one or more compounds including one or more nitrogen atoms and one or more atoms selected from hydrogen, oxygen and halogen, wherein the apparatus contains the composition.

- 2. (Currently amended) An apparatus according to claim 1, wherein the composition further contains at least one selected from of:
  - (c)  $N_2$ ;
  - (d) H<sub>2</sub>; and
  - (e) one or more inert gases.
- 3. (Canceled)
- 4. (Original) An apparatus according to claim 1, wherein the one or more alkanes includes tetrafluoromethane.
- 5. (Original) An apparatus according to claim 1, wherein the one or more compounds includes one or more nitrogen hydrides.

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6. (Currently amended) An apparatus according to claim 1, wherein the one or more compounds includes at least one <u>selected from of ammonia</u>, diazene, hydrazine and <u>a salts</u> thereof.

- 7. (Original) An apparatus according to claim 1, wherein the one or more compounds includes nitric acid.
- 8. (Currently amended) An apparatus according to claim 1, wherein the composition further contains at least one selected from of:
  - (c) N<sub>2</sub>; and
  - $(d) H_2$ .
- 9. (Original) An apparatus according to claim 1, wherein the one or more compounds includes nitrogen dioxide.
- 10. (Currently amended) An apparatus according to claim 1, wherein the composition further contains at least one selected from of:
  - (c) oxygen;
  - (d) hydrogen; and
  - (e) water.
- 11. (Previously presented) An apparatus according to claim 1, wherein the beam passes through the space.
- 12. (Original) An apparatus according to claim 1, wherein the space comprises at least a part of the radiation system, or at least a part of the projection system, or at least a part of the radiation system and the projection system.
- 13. (Original) An apparatus according to claim 1, further comprising an activation device configured to produce reactive species of the composition.

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- 14. (Currently amended) An apparatus according to claim 13, wherein the activation device is configured to produce produces the reactive species by at least one of exciting molecules, or and dissociating molecules, or both exciting and dissociating molecules, of at least one of the one or more alkanes, or and the one or more compounds, or both the one or more alkanes and the one or more compounds.
- 15. (Original) An apparatus according to claim 13, wherein the activation device is one of a DUV source, an EUV source, a plasma source, an electrical field, a magnetic field, or an electron source.
- 16. (Original) An apparatus according to claim 13, wherein the activation device includes the radiation system.
- 17. (Original) An apparatus according to claim 1, wherein the composition is a gas, a solid, a liquid, or a beam of molecules.
- 18. (Original) An apparatus according to claim 1, wherein the composition is encapsulated in a microporous media.
- 19. (Currently amended) A device manufacturing method, comprising: providing a beam of radiation using a radiation system; patterning the beam;

projecting the patterned beam of radiation onto a target portion of a layer of radiationsensitive material at least partially covering a substrate; and

producing reactive species of a composition to remove a contaminant from a surface, wherein a space through which the beam passes comprises the composition containing (a) and (b), wherein (a) is one or more perhalogenated C<sub>1</sub>-C<sub>6</sub> alkanes and (b) is one or more compounds including one or more nitrogen atoms and one or more atoms selected from

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hydrogen, oxygen and halogen, wherein the space contains at least a portion of the radiation-system.

20. (Currently amended) A method according to claim 19, wherein producing the reactive species includes at least one of exciting molecules, or and dissociating molecules, or both exciting and dissociating molecules, of at least one of the one or more alkanes, or and the one or more compounds.